Storrow Drive Tunnel Project
Joint Meeting of the Landscape and Transportation Advisory Committees Joint Committee Meeting Number # 5

June 6, 2007

Summary Minutes

Welcome and Introductions

Co-chairman Elliott Laffer opened the meeting and said that Patrice Todisco was on vacation. Mr. Laffer asked those present to introduce themselves (see the attendance list, attached.) He noted that there was an ambitious agenda of information to be presented and suggested that members hold their questions until the end of each segment.

Presentation of Through Traffic Link Analysis

Sanjay Kaul, Central Transportation Planning Staff (CTPS), first presented a memo on the through traffic on Storrow Drive as a percentage of the total traffic using Storrow Drive. At earlier meetings, CTPS staff members had stated that Storrow Drive serves as a feeder and distributor road for Back Bay, Beacon Hill and other nearby locations and that most of the traffic on the roadway does not travel its full length (i.e., through the length of the study area from River Street to Leverett Circle).

Mr. Kaul said that DCR asked CTPS to look at this question, particularly in light of questions posed by committee members who reviewed the data in the Origin and Destination Study. He defined eastbound through traffic as vehicles on Storrow Drive eastbound east of Cambridge Street and still there past the exit for Charles Circle. Westbound through traffic was defined as traffic remaining on Storrow Drive westbound, west of Leverett Circle and still there before the River Street exit.

Mr. Kaul described the select link assignment as one of the tools of the highway assignment model. It provides information only on trips using a particular part of the regional roadway network. The select link assignments were run for three time periods: AM peak, 6 – 9 AM; mid-day, 9 AM to 3 PM; and PM peak, 3 – 6 PM. The results provide total traffic data on Storrow Drive for a 12-hour period from 6 AM to 6 PM. This 12-hour period allows comparison to the BETA Origin and Destination Survey undertaken last spring from 7 AM to 7 PM.

Mr. Kaul said that for the eastbound traffic, CTPS chose a link east of the Cambridge Street on-ramp as the start point and a link east of the Charles Circle off-ramp as the end point to determine the total through traffic in that direction. For this segment, over 12 hours, the analysis showed that 29,000 vehicles traveled eastbound, exiting Storrow Drive as follows: 11% at BU (3200); 11% to Kenmore (3200); 26% to Fenway (7600); 7% to Copley (2000); 9.5% to Arlington Street (2700); and 11.5% to Charles Circle (3300). The volume of traffic continuing east of the Charles Circle off-ramp was 7,000 vehicles. This indicates that 24% of the traffic had a destination link to either the tunnel to I-93 North or the traffic signals at Leverett Circle. In its O&D Study, BETA had estimated 23% through traffic, which is essentially the same volume.

Turning to the westbound direction, Mr. Kaul said that 48,200 vehicles passed through the link for the 12-hour period between the Leverett Circle on-ramp and the Charles Circle off-ramp. Exiting traffic included: 18% at Charles Circle (8700); 24% to Arlington Street (11,500); and 42% at Kenmore/Charlesgate/Fenway (20,400). About 16% of the traffic (7700 vehicles) continued through the link, compared to BETA's O&D finding of 17%, again, a nearly identical result.

Presentation of Traffic Modeling Data for 2010 Construction Conditions and Discussion

Mr. Kaul continued his remarks using a Powerpoint presentation and handouts. He noted that this information continues CTPS's earlier presentations and depends on the model that he has described in detail to the committee members in previous meetings. Mr. Kaul said that the corridor covers the area west of North Harvard Street to Leverett Circle. The base year for the analysis is 2006 and the forecast year is 2010. Because the focus of the presentation is on construction, Mr. Kaul said that he would be focusing on options A and D. The goal of the modeling was to find out how traffic would change during construction and the phases of work in A and D include the most representative and challenging of all of the possibilities. The A option is used as the NO BUILD option for comparative purposes.

Mr. Kaul showed a diagram depicting the regional roadways in a dark gold and local streets in a lighter yellow. In option A, during the key construction stages, ramp closures affect the traffic flow. The eastbound and westbound entrances from Berkeley Street are closed, as well as the eastbound exits at Arlington and Clarendon Streets. An exit ramp is added at Dartmouth Street. Westbound, one lane remains for the Arlington Street exit and there is a lane drop past this location to the west.

For the morning peak period, the model shows a significant decrease in volume on Storrow Drive as people try to find alternate paths to avoid the roadway. Mr. Kaul used a map depicting reduced traffic volume in blue and increased volume in red. About 12% of the vehicles exit at Charlesgate or Fenway and 5% less traffic gets on from Charlesgate/Fenway to avoid the construction zone. Additionally, there is a 98% increase in the volume exiting at Dartmouth Street as opposed to Clarendon Street, resulting in about 10% less traffic on Storrow Drive beyond that point.

Traveling westbound, there is also a decrease in volume, with an 11% increase in vehicles exiting at Charles Circle. With no westbound on ramp at Berkeley Street, drivers are taking other roads to move to the west. As a result, there is a 21% decrease in traffic volume on the roadway segment after Berkeley Street. On-ramp volume from Charlesgate/Fenway (westbound) increases by 18%.

In the afternoon, the scenario is similar. Mr. Kaul showed the study area diagram with heavy red lines on Back Bay streets and around Charles Street. Vehicles try to exit Storrow Drive to avoid the construction area by leaving at Fenway or Charlesgate or at Charles Circle on the western and eastern ends of the zone of work. Eastbound, about 10% more vehicles exit at Charlesgate or Fenway and 5% less traffic gets on from Charlesgate/Fenway to avoid the construction zone. In the westbound direction, there is an 11% increase in vehicles exiting at Charles Circle and volume on Beacon Street increases by 92%. With no westbound on ramp at Berkeley Street, drivers are taking other roads to move to the west. As a result, there is a 22% decrease in traffic volume on the roadway segment after Berkeley Street. On ramp volume from Charlesgate/Fenway (westbound) increases by 35%.

Turning to option D, Mr. Kaul listed the changes for construction: ramp closures, eastbound and westbound from Berkeley Street and eastbound to Clarendon Street; and temporary traffic signals at Arlington Street for east and westbound traffic. There are also lane changes, with a lane gone westbound past Arlington Street and two lanes eastbound.

Mr. Kaul said that the story for option D is similar to A. Drivers exit the roadway before reaching the construction area.

For the morning peak period, about 16% more vehicles exit at Charlesgate or Fenway and 27% less traffic gets on from Charlesgate/Fenway to avoid the construction zone. Overall, there is 20% less volume on the roadway, with 30% less from Arlington Street to the east. The model does not show an increase in vehicles exiting at Dartmouth Street: they are leaving before reaching it.

Westbound, there is also a decrease in traffic volume, with a 35% increase in vehicles exiting at Charles Circle. With no westbound ramp on Berkeley Street, drivers are taking other roads to move to the west. As a result, there is a 26% decrease in traffic volume on the roadway segment after Berkeley Street. On ramp volume from Charlesgate/Fenway (westbound) increases by 30%.

In the afternoon peak period, there is less traffic entering to travel eastbound and the story is similar for westbound. Vehicles are using local streets, Memorial Drive and the Mass Turnpike to avoid using Storrow Drive. This use shows up in the intersection analysis. Vehicles exit Storrow Drive to avoid the construction area by leaving at Fenway or Charlesgate or at Charles Circle on the western and eastern ends of the zone of work. Eastbound, about 8% more vehicles exit at Charlesgate or Fenway and 18% less traffic gets-on from Charlesgate/Fenway to avoid the construction zone. In the westbound

direction, there is a 42% increase in vehicles exiting at Charles Circle. With no westbound on ramp at Berkeley Street, drivers are taking other roads to move to the west. As a result, there is a 27% decrease in traffic volume on the roadway segment after Berkeley Street. On-ramp volume from Charlesgate/Fenway (westbound) increases by 43%.

Queues and Delays

Tom Lisco, CTPS, said that queues and delays are actually shorter during the construction phase. Traffic moves elsewhere to avoid the construction and the destinations are local streets. In option A, the queue from the north (I-93) is about the same as it is today.

For option D, the traffic signal at Arlington Street prompts a new, two-lane queue in the eastbound lanes from Kenmore through Arlington to Charles Circle. The same queue is present during the PM peak period. Mr. Lisco said that the model is not smart enough to discern between parallel queues and the western portion of the eastbound queue might actually be shorter than it appears.

INTERSECTION ANALYSIS

Mike Wasielewski, Beta, presented the level of service (LOS) analysis summary for option A, the no build option in this situation, and option D, during the construction period. He used an 11 x 17" handout to show the LOS and an 8 ½ x 11" set of charts to show the approach queues at the intersections.

Mr. Wasielewski reminded the committee members of the format of the diagrams. He said that for the most part the far eastern and western ends of the study area remain unaffected by the construction. For option A, he zoomed in on the area from Charlesgate to Charles Circle, where the primary impacts take place. LOS degrades in the study area, and volume increase on Commonwealth Ave, Boylston Street and Arlington Street. There is an improvement on Berkeley Street and Clarendon Street, which are handling less traffic (since it is exiting before reaching this area).

For option D, LOS at Arlington Street is F and around Charles Street is F as well; vehicles are traveling down Charles Street from Charles Circle to avoid the signals on Storrow Drive. In the afternoon, Back Bay and Beacon Hill streets around Charles Street, Arlington Street and Boston Public Garden suffer from degrading levels of service, largely E's and F's.

Turning to the queues at intersections, Mr. Wasielewski said the queues at Charles Circle lengthen for option D substantially. There is an increase in queue length at Arlington and Beacon Streets and a queue on Storrow Drive due to the signals at peak construction. In the afternoon, queues are much longer westbound to Charles Circle and the area around

Charles, Arlington and Beacon Streets are pretty well jammed up. Queuing down Arlington Street increases.

John DeBenedictis, City of Boston, suggested that other intersections should be included: Mass Ave at Boylston; Boylston at Clarendon; and Boylston at Berkeley. Beta said it could look at these locations. Adam Shulman asked about the BU Bridge at Commonwealth Avenue and at Memorial Drive. He said that it is likely that drivers will be using the bridge to circle around the construction and these intersections should be modeled as well. There could be negative impacts there as well.

Tony Pangaro observed that there are significant differences between the A and D impacts. The A option includes 13 months of critical construction stages and D presents 30 months of critical impacts. Marilyn Wellons seconded the request to look at impacts to the BU Bridge. Mr. Shulman asked if he could get counts at different locations and Mr. Kaul said he can provide them for any link for which CTPS has data.

John Messervy asked if there has been any response to the request to study an additional ramp or ramps from the Mass Turnpike to serve westbound vehicles. Kate Fichter, EOT, said that DCR made a request to the Turnpike, which expressed no interest in undertaking such a study. Mr. Laffer said he would draft a letter the next day to the Secretary asking him for a response. Meg Mainzer-Cohen asked if the city has experience dealing with traffic diverted on to local streets. Mr. DeBenedictis said that for the Central Artery project, the traffic was largely kept within a parallel corridor but there were pretty frequent ramp and exit changes. The group discussed potential gridlock for the areas of Clarendon, Dartmouth, Berkeley, Arlington and Charles Streets and the area around the Public Garden. Jim Baecker said that once there is a preferred option and a 25% design, DCR and its consultants will work with the city on a Traffic Management Plan (TMP) for vehicles and pedestrians and with plans to increase transit use. The Central Artery now has a traffic management system, and the managers have offered to work with DCR during the Storrow Drive construction. DCR will work very closely with Boston Transportation Department (BTD) to use this system and adjust traffic lights, dispatch tow trucks, etc., to deal with tie-ups and reroute traffic as necessary. Mr. DeBenedictis added that cost is a factor and after the design is at 25% the team can make a much more detailed assessment of the impacts, needs and cost and benefits of various options.

Meg Mainzer-Cohen asked if the team has explored every way to manage traffic, posing the question: are there any sacred cows? She is concerned that the Back Bay will not be able to function and she suggested that every possible option has to be considered, including changing street directions if need be. Mr. Baecker said that this is the first cut in terms of looking at the traffic and the work will be refined and there will be more focus on the precise details.

Mr. Laffer asked if there will be mitigation plans in the DEIR. Mr. Baecker said there will be some mitigation outlined in the document, but with a final choice, it will be possible to look at problems and solutions in more detail in the FEIR. The public can

comment on those issues. Mr. Haglund added that some mitigation applies to all of the options, while other ideas relate to specific plans.

Presentation of Layout Plans for Options B-3 and D-3

Mike McCall, Project Manager for SGH, presented the layout plans for options D-3 and B-3 (he made 11 x 17" plans available). Beginning with D-3, he said the goal was to see how the tunnel option could be preserved at lower cost and with a shorter construction duration. The plan begins by eliminating the eastbound exit ramp at Arlington Street so that the option could contain a shorter, two-way tunnel (700 feet, portal to portal). The option re-opens an exit ramp at Dartmouth Street and keeps the eastbound Clarendon Street and Berkeley Street ramps. Westbound to Arlington Street and westbound on from Berkeley Street ramps also remain.

Mr. McCall said the advantage of this option is that it offers more surface green way, like the main D option, but is less expensive to build and will take a bit less time to construct. Unlike other tunnel options, it will not require active or passive venting.

B-3 was developed by a subcommittee of the Advisory Committees. It is a largely surface option that contains a short underpass at Arlington Street in a short "boat" or submerged section that allows a westbound exit ramp at this location. The westbound ramp could be depressed as well if it buffers noise, but that might create other problems. Mr. McCall said there is a bit of a penalty to get everything at grade. The option eliminates the eastbound exit to Arlington and the westbound ramp at Berkeley Street. It narrows Storrow Drive from three lanes to two after Arlington Street westbound up to Charlesgate. On the eastbound side, it re-opens an exit ramp to Dartmouth Street and retains the ramps at Clarendon and Berkeley Streets. It keeps Mugar Way and Embankment Road and allows local traffic to enter Storrow Drive eastbound near Mt. Vernon Street.

Mr. Pangaro suggested that this is a good start to a positive alternative. He said it will be important to assure that the geometry works for the roadway.

Mr. McCall explained that the grade separation allows the westbound ramp to Arlington Street to be built roughly at grade since it passes over the eastbound lane. Jackie Yessian pointed out that if the westbound lane is also depressed, pedestrians will not be able to cross Storrow Drive on foot for special events such as the 4th of July celebration. Mr. McCall agreed and said that the eastbound depression is the key one. Susan Barrow-Williams from Community Boating pointed out that CBI needs to be able to get off Storrow Drive in this area for supplies, deliveries, etc.

Mr. O'Brien asked if D-3 encroaches on the Esplanade in the same way as the basic D option. Mr. McCall said that there is some intrusion on the Esplanade, but it is much less than in D.

Mr. Pangaro asked if the boat section in B-3 could be shorter to permit the Berkeley Street westbound ramp to remain. Mr. McCall said that engineers are still working on the geometry, looking at what else is in the area (the Boston Marginal Conduit), etc.

There was a discussion of the filing of the DEIR, who will choose the option and whether or not the committee will reach a consensus. Mr. Baecker said that the team will provide the committee members with a summary chart by the June 20 meeting and will supply more data on the new options B-3 and D-3. DCR will choose a preferred alternative for the DEIR but the agency also wants to hear from the committee members and their organizations on the benefits and drawbacks of the options before making that decision. After the filing, there will be an extended comment period with a couple of briefings planned and another opportunity for comment letters. The Secretary will instruct DCR on the elements of the Final EIR (FEIR) and will accept, will accept with changes or will direct DCR to choose a new option or provide more data on an existing one. The DEIR will outline much of the information that has been contained in the presentations to the committee along with noise and air quality and other data.

Marilyn Wellons asked about the useful life of A versus the other options. Mr. McCall said that the option A carried in the ENF is a rehabilitation of the tunnel, not a complete rebuilding, which results in a shorter predicted useful life of 40 years. The other tunnel options include new tunnels, which have a 75-year useful life. The ENF laid out these differences and DCR chose to go with the rehabilitated A. Improving the weaknesses in the roof section would require a good deal of night work in a partial closure scenario. Mr. Haglund said that commenters on the DEIR can ask for more information on a rebuilt A if that is what they prefer.

Mr. Laffer reported that a subcommittee was meeting this week to discuss transit issues to revisit with the MBTA.

ATTENDANCE – Landscaping Committee Members

Committee Members (+ indicates present at meeting, only for this category)

+	Margaret Dyson	City of Boston, Parks and Recreation Department
+	Bob Corning	Boston Society of Landscape Architects
+	Bob Sloan	Walk Boston
	Patrice Todisco	The Esplanade Association
	Renata von Tscharner	Charles River Conservancy
	Pallavi Mande	Charles River Watershed Association
	Stephanie Hurley	Charles River Watershed Association
+	Susan Barrow-Williams	Community Boating
	Sarah Monaco	Back Bay Garden Club
	Jackie Blombach	Back Bay Garden Club
	Linda Cox	Beacon Hill Civic Association
+	Sharon Malt	Beacon Hill Garden Club

Attendance – Transportation Committee Members

Committee Members
+ indicates present at meeting

+	Tom Nally	A Better City
+	Meg Mainzer-Cohen	Back Bay Association
+	Peter Thomson	Beacon Hill Civic Association
+	Steve Young	Beacon Hill Civic Association
+	Elliott Laffer	Boston Groundwater Trust
	Michael Donovan	Boston University
	Jim Shaer	Boston University
	Leslie Greis	Cambridgeport Neighborhood Association
	Drew Phelps	Cambridgeport Neighborhood Association
	Kevin Casey	Harvard University
	Deborah Carrow	Back Bay Association
+	Bhupesh Patel	Livable Streets Alliance
+	Christi Apicella	MASCO
	Sarah Hamilton	MASCO
+	Kelley Brown	MIT
+	Steven Wintermeier	Neighborhood Association of Back Bay
+	Barry Solar	Neighborhood Association of Back Bay
+	Philip Houck	Neighborhood Association of Back Bay
+	John Messervy	MGH/Partners HealthCare System, Inc.
	Bonnie Michelman	MGH/Partners HealthCare System, Inc.
+	Marilyn Wellons	Regional Transportation Advisory Council
	Larry Adkins	Riverside Neighborhood Association
	Malek Al-Khatib	West End Civic Association

	Carol Niemira	West End Civic Association
+	Bob Sloane	Walk Boston
+	Adam Shulman	City of Cambridge, Transportation Planning

Municipal and State Representatives

Rep. Marty Walz	
Tom Lisco	Central Transportation Planning Staff (CTPS)
John DeBenedictis	City of Boston
Kate Fichter	MA EOT
Sanjay Kaul	CTPS
Bill Kuttner	CTPS
Scott Peterson	CTPS
Michael O'Dowd	Mass Highway Department

Project Staff

Jim Baecker	DCR
Karl Haglund	DCR
David Lenhardt	DCR
Mike McCall	SGH
Nancy Farrell	RVA
Ken Petraglia	Beta Group
Mike Wasielewski	Beta Group
Kate Lesser	Epsilon
Victoria Fletcher	Epsilon

Members of the Public

Karin Mathiesen	Councilor Ross's office
Joe Crowley	Mass General Hospital
Bob O'Brien	West End Civic Association
Alex Valentine	
Bill Kuttner	Charlestown resident
Jeannette Herrmann	Beacon Hill Civic Association
Jackie Yessian	NABB
Tony Pangaro	
Suzanne Besser	Back Bay Sun, Beacon Hill Times
Carrie Russell	CRussell@clf.org
Steven R. Berke	West End resident
Charles R. Leacy	Waltham
Stephen Miller	Walk Boston
Tina Yen	Walk Boston
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